

Reply Dated December 18, 2003
Serial No. 09/740,052

IN THE CLAIMS

Claim 1. (Previously Amended) A method for a Virtual Private Network (VPN) server that manages bandwidth of a remote link, comprising:

assigning by the VPN server a portion of the bandwidth to at least one application group;
and
metering by the VPN server packets belonging to the application group;
wherein the VPN server is configured to at least one of authenticate, encapsulate, and de-encapsulate at least a portion of the packets.

Claim 2. (Canceled).

Claim 3. (Previously Amended) A method for a Virtual Private Network (VPN) server that manages bandwidth of a remote link, comprising:

assigning by the VPN server a portion of the bandwidth to at least one application group;
and
metering by the VPN server packets belonging to the application group;
wherein the VPN server is directly connected to other links having larger bandwidth than the available bandwidth of the remote link; and wherein the VPN server is configured to at least one of authenticate, encapsulate, and de-encapsulate at least a portion of the packets.

Claim 4. (Original) The method of claim 1 wherein the packets belonging to the application group share a pre-defined configuration.

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Claim 5. (Previously Amended) A method for a Virtual Private Network (VPN) server that manages bandwidth of a remote link, comprising:

assigning by the VPN server a portion of the bandwidth to at least one application group;
and

metering by the VPN server packets belonging to the application group;

wherein the packets belonging to the application group contend equally for the portion of the bandwidth; and wherein the VPN server is configured to at least one of authenticate, encapsulate, and de-encapsulate at least a portion of the packets.

Claim 6. (Original) The method of claim 1 wherein metering the packets group further includes metering flow rate of the packets going through the server in either direction.

Claim 7. (Original) The method of claim 6 wherein metering the packets further includes rejecting the packets if the flow rate exceeds the portion of the assigned bandwidth.

Claim 8. (Previously Amended) A method for a Virtual Private Network (VPN) server that manages bandwidth of a remote link, comprising:

assigning by the VPN server a portion of the bandwidth to at least one application group;

metering by the VPN server packets belonging to the application group; and

allowing a user to specify the bandwidth of the remote link from a user interface;

wherein the VPN server is configured to at least one of authenticate, encapsulate, and de-encapsulate at least a portion of the packets.

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Claim 9. (Previously Amended) A method for a Virtual Private Network (VPN) server that manages bandwidth of a remote link, comprising:

- assigning by the VPN server a portion of the bandwidth to at least one application group;
- metering by the VPN server packets belonging to the application group; and
- allowing a user to specify the portion of the assigned bandwidth from a user interface;

wherein the VPN server is configured to at least one of authenticate, encapsulate, and de-encapsulate at least a portion of the packets.

Claim 10. (Previously Amended) A system for managing bandwidth of a remote link comprising:

- a Virtual Private Network (VPN) server;
- a contention pool having a portion of the bandwidth for at least one application group;

and

- a meter associated with the VPN server for metering the packets belonging to the application group;

wherein the server is a VPN server is configured to at least one of authenticate, encapsulate, and de-encapsulate at least a portion of the packets.

Claim 11. (Canceled).

Claim 12. (Previously Amended) A system for managing bandwidth of a remote link comprising:

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a Virtual Private Network (VPN) server;
a contention pool having a portion of the bandwidth for at least one application group;
and
a meter associated with the VPN server for metering packets belonging to the application group by the VPN server;
wherein the VPN server is directly connected to other links having larger bandwidth than the available bandwidth of the remote link; and wherein the VPN server is configured to at least one of authenticate, encapsulate, and de-encapsulate at least a portion of the packets.

Claim 13. (Original) The system of claim 10 wherein the packets belonging to the application group share a pre-defined configuration.

Claim 14. (Previously Amended) A system for managing bandwidth of a remote link comprising:

a Virtual Private Network (VPN) server;
a contention pool having a portion of the bandwidth for at least one application group;
and
a meter associated with the VPN server for metering packets belonging to the application group by the VPN server;
wherein the packets belonging to the application group contend equally for the contention pool; and wherein the VPN server is configured to at least one of authenticate, encapsulate, and de-encapsulate at least a portion of the packets.

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Claim 15. (Original) The system of claim 10 wherein the meter further meters flow rate of the packets going through the server in either direction.

Claim 16. (Original) The system of claim 15 wherein the meter further rejects the packets if the flow rate exceeds the assigned portion of the bandwidth.

Claim 17. (Previously Amended) A system for managing bandwidth of a remote link comprising:

- a Virtual Private Network (VPN) server;

- a contention pool having a portion of the bandwidth for at least one application group;

and

- a meter associated with the VPN server for metering packets belonging to the application group by the VPN server; and

- a user interface that allows a user to specify the bandwidth of the link;

wherein the VPN server is configured to at least one of authenticate, encapsulate, and de-encapsulate at least a portion of the packets.

Claim 18. (Previously Amended) A system for managing bandwidth of a remote link comprising:

- a Virtual Private Network (VPN) server;

- a contention pool having a portion of the bandwidth for at least one application group;

and

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a meter associated with the VPN server for metering packets belonging to the application group by the VPN server; and

a user interface that allows a user to specify the assigned portion of the bandwidth;

wherein the VPN server is configured to at least one of authenticate, encapsulate, and de-encapsulate at least a portion of the packets.